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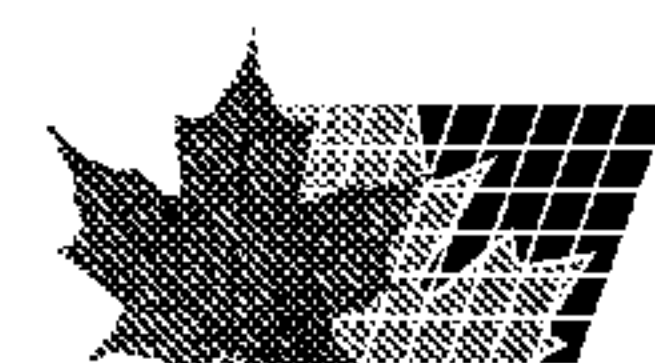
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(54) Titre : DECOQUILLAGE A LA VAPEUR DE MOLLUSQUES BIVALVE

(54) Title: STEAM SHUCKING OF BIVALVE MOLLUSCS

(57) **Abrégé/Abstract:**

The separation of shell and meat, in the processing of bivalve molluscs has been a demanding task. The preliminary opening of the shell is resisted by the design of the animal. The efficient removal of the meat from the shell has historically required hand scraping at the shell-meat interface. The complete removal of shell from the meat, especially where the opening has been done by mechanical smashing, is complicated by visibility of the shards. Competitive methods of ultra-high pressure and thermal blast are needlessly expensive, slow, and dangerous when compared to this method.



Low Pressure Steam Shucking of Bivalve Molluscs

Abstract of the disclosure

The separation of shell and meat, in the processing of bivalve molluscs has been a demanding task. The preliminary opening of the shell is resisted by the design of the animal. The efficient removal of the meat from the shell has historically required hand scraping at the shell-meat interface. The complete removal of shell from the meat, especially where the opening has been done by mechanical smashing, is complicated by visibility of the shards.

Competitive methods of ultra-high pressure and thermal blast are needlessly expensive, slow, and dangerous when compared to this method.

Specifications

This invention relates to a method and a process for degrading, to a dramatic degree, the adhesion between muscle and shell in bivalve molluscs. This simplifies the opening of the shells, and facilitating the separation of the meat and shell.

It is common for bivalve molluscs to be opened by the insertion of a knife between the two shell pieces and then using the knife to cut the muscle, allowing the shell to be opened and the meat extracted. Alternatively the shell may be smashed by mechanical means, and the meat extracted from amongst the shell pieces. It is also possible to cook the animal, in the shell, which may cause the shell to open – however this is unacceptable where meat is desired in the raw form.

We have found that brief exposure to low pressure saturated steam, followed by a quick restoration to atmospheric pressure will simplify the opening of bivalves without significant cooking of the meat.

Figure 1 shows a chamber into which a moderate number of bivalves are loaded. The chamber is then closed and sealed. Steam is admitted, and air is vented. Then the pressure is brought up to approximately one atmosphere above ambient, and held there for a period on the order of five to ten seconds, by the admission of additional live steam. At the termination of this exposure the steam is rapidly vented and the product removed.

Claims

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

- 1** A process and a method for shucking bivalve molluscs involving the exposure to steam and pressure.
- 2** A process and a method as defined in claim 1 in which the temperature and time exposure is sufficiently brief that the meat is not cooked.
- 3** A process and a method as defined in claim 1 in which the shell is either opened, or rendered openable by application of minimal force.
- 4** A process and a method as defined in claim 1 in which the meat is either detached from the shell, or loosened so it may be removed by application of minimal force.
- 5** A process and a method as defined in claim 1 in which the shell is left whole, or is minimally fractured.
- 6** A process and a method as defined in claim 1 in which the pressures used are sufficiently low that the vessel used is not classified as a pressure vessel.

Figure 1